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ABSTRACT

This report discusses the results of a five-year effort to develop a comprehensive planning process that would enable school districts to initiate and maintain a self-sustaining planning capability. In addition to examining the general principles and procedures of the comprehensive planning approach to school district planning, the author describes in detail a two-year field test of a self-instructional version of the system in the Neshaminy School District in Pennsylvania. Data from the field test indicate that the tested planning system can be used with minimal outside help to successfully initiate a curriculum-level planning capability within a school district. (JG)

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INITIATING DISTRICT-WIDE CURRICULUM PLANNING

by

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INITIATING DISTRICT-WIDE CURRICULUM PLANNING

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and

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ABSTRACT

Initiating a planning effort in school districts requires attention to the mechanics of its adoption as well as the communication of planning concepts. Such a system has been developed by the Administering for Change Program of RBS. This package emphasizes involvement of teachers and administrators through semi-structured tasks in any curriculum area of the district's choice. A self-instructional version of this system is being field tested by the Neshaminy School District.

Field test data indicate to both users and developers that this process of initiating curriculum level planning is viable and has valuable spin-off benefit to the district.

INTRODUCTION

The need for planning in education is not a highly disputed point. It is also generally agreed that wasteful imbalances within the educational system must be rectified. Costs, which increase more rapidly than school revenues, create pressures which require that those resources which are available be allocated more judiciously and effectively. As costs rise, demands for better education and more alternatives in education also increase. The complexity of our times has forced managers and administrators in business, defense, and industry to develop improved methods of collecting information for use in both planning and decision-making; schools, too, need to develop such methods. The Office of Education, recognizing the importance of local school district planning, has delineated this need in their Renewal Center strategy. Planning was also included in the list of needs compiled from the annual AASA Superintendency Survey. Thus, the need for planning is apparent; the difficulty lies in the fact that to date feasible planning systems for use at the school district level have not been available.

The Comprehensive Planning Component of the Administering for Change Program of Research for Better Schools, Inc. has been involved for the past two years with the Neshaminy School District of Pennsylvania in a joint venture to field test instructional materials designed to initiate curriculum planning at the school district level. This two-year involvement was the culmination of a five-year developmental effort.

The objective of this five-year effort was to develop a method school districts could use to initiate and maintain a planning capability which, in turn, would become self-sustaining. Thus, it was necessary to design a mechanism that could withstand individual staff changes and which did not rely on the availability and competence of outside consultants.

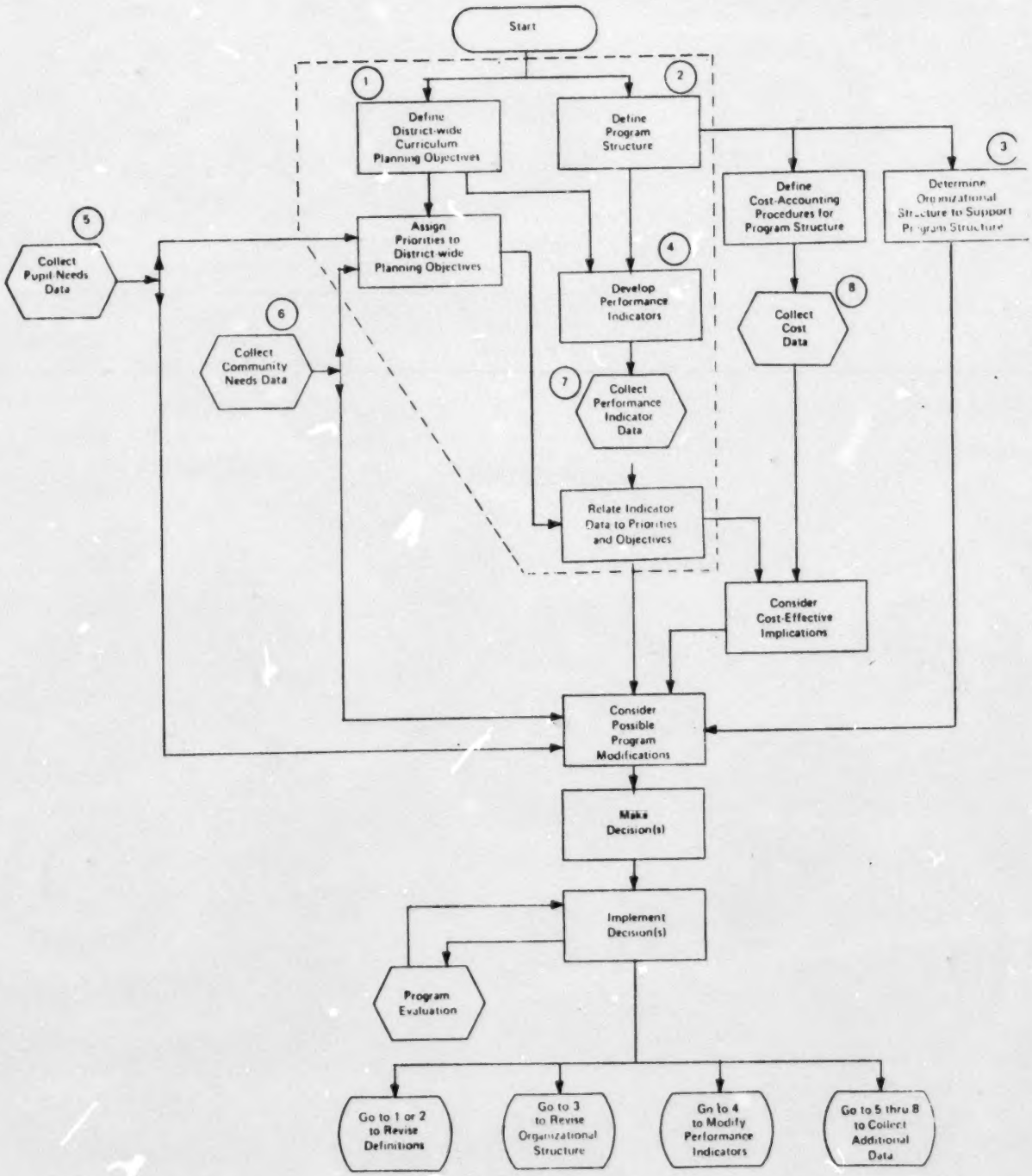
In view of the objectives outlined above, instructional materials were developed which were designed to emphasize the planning process, so that district personnel could develop the practical experience and expertise needed to carry out the various activities involved in curriculum planning.

Before discussing the Neshaminy experience, it would be helpful to review briefly the comprehensive planning process developed.

THE COMPREHENSIVE PLANNING PROCESS

The flow chart on the following page shows the relationships among various aspects of the comprehensive planning process. The emphasis is on the initiation of a planning effort, although various other data-gathering activities that could and should occur are also indicated.

The area bounded by dashes in the diagram contains all of the steps involved in initiating a planning effort, and the Neshaminy field test was related to the instructional materials developed for use in imple-



A COMPREHENSIVE PLANNING MODEL FOR CURRICULUM CHANGE

menting these steps.[1] The definition of curriculum planning objectives, the definition of the program structure, the assignment of priorities, and the development of performance indicators are the responsibilities of the teachers and central office administrators who form the planning groups. The boxes representing data collection activities are hexagonal.

Each vertical column represents a different area of information. The first column to the right of Box 2 involves financial concerns. The Program Planning and Budgetary Systems which have been implemented in some schools traditionally have been based on cost data, but administrators have been unable to broaden this approach to support and enhance change at the classroom level. Other approaches to planning have belabored the definition of goals and objectives until only a refined set of labels remained that were no more effective in improving schools than the budgetary approach mentioned above. The comprehensive planning approach to initiating planning in the district does not neglect either budgetary considerations or the definition of objectives, but it does give them relatively less emphasis--especially in the context of initial planning efforts. In the comprehensive planning approach, the emphasis

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[1]The instructional materials field tested in the Neshaminy Schools were originally entitled Indicators of Performance. This package contained three separate manuals: Manual 1--Project Manager's Manual, Manual 2--Basic Skills and Concepts, and Manual 3--Beginning Implementation. The material covered in the three manuals mentioned above has been rewritten into a single book and will soon be available commercially available under the title Handbook of Comprehensive Planning from Educational Technology Publications, Englewood Cliffs, New Jersey 07632. The target date for publication is fall, 1974. Although in the body of this report references to the instructional materials refer to the original three-manual package, Table I shows the instructional objectives included in terms of the new Handbook of Comprehensive Planning.

is on a planning process which has maximum impact in the classroom where it is most useful to the instructional staff. As the district planning capability develops, procedures may be modified, instruments updated, and additional sources of information included.

Initiating the Planning Process

When the comprehensive planning process is initiated in a given school district, the frst step is the development of a set of district-wide objectives within a specific curriculum area. These planning objectives are developed by a planning group made up of local teachers and central office administrators. Performance indicators, tests which measure how well these planning objectives have been achieved, are then developed and administered by classroom teachers.

To insure confidentiality of information, data from an individual class are given only to the teacher involved. Such information may be very useful in planning for instructional purposes at the classroom level; it also enables individual teachers to evaluate their own classroom efforts, in attempting to assess the quality of the pupil-teacher-curriculum interaction.

When the data gathered from several classrooms are given to a principal, the information is pooled in such a way that data on a specific classroom or teacher cannot be identified. The principal studies and analyzes information from all classrooms and teachers involved in the planning effort in an attempt to identify overall patterns of strength and weakness in the educational programs in his building. By assessing

this information, a principal, in collaboration with the teachers, is able to prepare a plan for change which includes information on pupil performance as well as any estimated expenditures which the changes proposed may involve.

At the central office level, the administrative staff should review recommendations submitted by the principals, prepare a district plan for change which encompasses the building-level proposals, and structure whatever support is needed to implement the changes approved.

The process described above provides a mechanism designed to improve educational programs by focusing on classroom accomplishments and difficulties rather than on individual student achievement. The implementation of this planning effort, which includes direct and extensive teacher involvement, helps school personnel to develop an information base that enables them to view district activities in terms of objectives common to many district programs and to assess the effectiveness of district programs on a current basis. The process allows all participating staff members to become familiar with planning skills which can be related to their daily activities. Participants also develop specific skills in the development and use of planning objectives and indicators of performance.

The following description shows how a planning effort could be initiated in a given school district and details the various activities which would be involved.

Situation:

Suppose that a three-year plan has been developed for the installation of a comprehensive planning system in a school district.

Initially, the plan involves the creation of several planning groups to work in curriculum areas such as Reading, Mathematics, and Social Studies. Work in each area is to include all levels from early childhood education through senior high school.

Initial planning groups are formed which include teachers and building level administrators from various schools in the district. Just before the end of the school year, each planning group participates in an in-service program where a set of planning objectives are developed for each of the curriculum areas involved. During the summer, the people from the planning groups 'evelop performance indicators and prepare Teachers' Manuals for the various curriculum areas.

In September, teachers who did not participate in the development of the instruments but who wish to participate in the planning process are identified.

The implementation of this project involves the following steps:

1. Teacher administer pre-performance indicators to their students.
2. The pre-indicators are scored and the processed information is returned to individual teachers and principals.
3. Teachers complete class lists and forward them through their building planning coordinators to the data processing center.
4. Six months later, teachers administer post-indicators to their students.
5. The post-indicators are scored and the processed information is returned to the individual teachers and principals.
6. On the basis of the information received, teachers submit curriculum-related recommendations to the building planning coordinators.
7. The building planning coordinators prepare lists of recommendations for the principals.

8. Each principal prepares a report for his building, including a budget request for each curriculum area involved.

9. The Project Manager receives building-level recommendations for change from the principals and submits district-level recommendations for change to the superintendent.

10. The superintendent reviews the district-level recommendations with the Project Manager and the principals.

11. The superintendent prepares and submits a revised school district program plan and budget to the school board.

12. The school board decides on the plan and the budget.

During the second summer, a group of teachers revise the performance indicators to make needed improvements.

During the second school year, as more teachers decide to take part in the project, the in-service programs are broadened to accommodate the additional participants.

Participation

In implementing the comprehensive planning process, the participation of school district personnel should be as broad as possible in order to include the many individuals who:

1. have significant information to contribute,
2. have a stake in the decisions to be made, and/or
3. are needed for the actual implementation of the planning effort.

Thus, participants would include teachers across all grade levels, principals, and district-level curriculum specialists. Such broad-based participation is necessary not only to enhance the durability of the planning capability developed but also to achieve maximum effectiveness

in implementing any recommended change. All participation should be on a strictly voluntary basis.

There is one final major consideration involved in initiating the planning effort described here: in order to initiate any new set of activities effectively, a single individual should be assigned overall organizational and directional responsibility. This individual is referred to as the Project Manager.

Since the instructional materials were designed to include a practical set of planned activities, it was considered extremely important for the developmental team to work closely with school district staff members to determine the feasibility of various activities in terms of any district constraints related to time, cost, or performance potential. The Neshaminy field test provided the developmental team with an excellent opportunity to assess the effectiveness of these instructional materials. See Table I for the instructional objectives related to these materials.

District Commitment and Responsibilities

Commitment by top district-level administrators to the basic objectives and strategies of the comprehensive planning system cannot be overemphasized. As the importance of this consideration was recognized during the five-year developmental effort, a set of criteria was developed that any district deciding to implement this planning process should be willing to meet. These criteria are presented on page 11.

TABLE I--INSTRUCTIONAL OBJECTIVES

Section 1: Basic Skills and Concepts (Curriculum Planning Group)	Section 2: Beginning Implementation (Curriculum Planning Group).	Section 3: Project Manager (Project Manager)
Unit 1: Planning Objectives	Unit 1: How to Develop Your Performance Indicators	
The user will be able to: 1. Recognize how planning objectives differ from other kinds of objectives, specifically instructional objectives, behavioral objectives, and program objectives. 2. Select and develop planning objectives.	The user will be able to: 1. Suggest an organizational structure for the task force which supports the effective development of performance indicators. 2. Provide guidelines and considerations for the development of quality-controlled performance indicators and other related materials.	The user will: 1. Become familiar with the underlying assumptions upon which the comprehensive planning process is based. 2. Be able to understand and specify all of the tasks to be performed.
Unit 2: Priorities and Numerical Preferences for Planning Objectives	Unit 2: How to Plan for the Implementation Year	3. Be able to determine what resources will be needed for the project in terms of personnel, time, etc.
The user will be able to: 1. Examine the relationship between priorities and preference assignments. 2. Recognize the importance of priorities in the evaluation of a system's performance. 3. Utilize two alternative methods for assigning priorities to planning objectives.	The user will be able to: 1. Develop an implementation plan for the use of performance indicators during the coming school year. 2. Develop a schedule which will make the implementation possible.	4. Be able to estimate costs and prepare a budget. 5. Be able to monitor each step of the process effectively.
Unit 3: Program Structure		
The user will be able to: 1. Identify alternative ways of developing a program structure. 2. Determine and develop criteria that a school district can use to decide which program structure is suitable for their needs.		
Units 4 & 5: Performance Indicators & Their Use		
The user will be able to: 1. Identify alternative types of performance criteria. 2. Compare the advantages of using performance indicators instead of other performance measures. 3. Draw summary conclusions from results.		

General Criteria

1. Willingness to establish a highly participatory decision-making process; i.e., involving those who have information to contribute and those who will be responsible for implementing the decisions made;

2. Willingness to use Indicators of Performance for a minimum of three years, assuming, of course, that the staff is willing;

3. Willingness to consider feasible alternatives to existing programs based on the recommendations of teachers, principals, and other administrators which result from implementing the planning effort;

4. Willingness to commit an adequate budget for the effort;

5. Willingness to have all staff involved with Indicators of Performance respond to RBS evaluation and monitoring forms so that the planning process may be improved.

Start Up and 1st Summer Considerations

1. Agreement to assign an individual to be responsible for managing the planning process for the district. (This individual is the Project Manager.) If only one curriculum area is involved, this person may be a curriculum coordinator.

2. Agreement to identify and pay interested teachers and principals (8-15 per curriculum area) to complete a three-day individualized introduction to the basic skills and techniques involved. (It is possible to divide the three-day session into several segments.)

3. Agreement to allow the teachers and principals who complete the introductory session to develop performance indicators and Teachers' Manuals during a two week session early in the summer.

4. Agreement to pay for the reproduction costs connected with printing performance indicators and Teachers' Manuals for use in the school district during the coming school year.

1st School Year Considerations

1. Agreement to involve all teachers who voluntarily decide to participate during the coming school year.

2. Agreement to allow classroom teachers to maintain confidentiality of information while principals receive summary building-level information and the superintendent receives summary district-level information.

3. It is suggested but not mandatory that the school district use the data processing system developed in conjunction with this planning process.

4. Agreement to be open to recommendations for change made by teachers and principals.

5. Agreement to revise and reproduce performance indicators and Teachers' Manuals for the coming year.

2nd Summer and School Year

1. Agreement to repeat the planning experience of the previous year and to allow teachers and principals to participate on a strictly voluntary basis.

2. Agreement to take action on any feasible recommendations for program improvement derived from the recommendations made by teachers and principals.

Probably the most important of the criteria mentioned above is the requirement for broad-based participation. It is essential that those who are involved in any change, especially those required to implement it, be given the opportunity as well as the responsibility to provide input in the decision-making process.

Another strategy of great importance is assigning a Project Manager, who assumes responsibility for coordinating the entire planning effort. Unless this organizing, coordinating, and monitoring function is performed, no new effort can have a positive prognosis. The Project Manager

takes responsibility for the management[2] of a project[3] to insure that the specified end state or capability is reached within the time, cost, and performance specifications of that project. The person who acts as Project Manager could be a teacher, a principal, a curriculum specialist, or an assistant superintendent, depending on the size and scope of the project involved.

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[2]Management involves four major functions:

1. planning activities
2. organizing people to perform the activities
3. motivating people to coordinate their efforts
4. controlling the process and the performance of the project as it progresses.

[3]A project is defined as an effort which has a specified goal, starting and completion dates, a definite budget, and a stated acceptable level of performance.

THE NESHAMINY EFFORT

In the following sections of this paper, a detailed review is presented of the Neshaminy School District effort to initiate a planning process, together with a discussion of the effects to date of that effort and the extent to which the objectives of this approach were achieved. This review of the Neshaminy effort has been organized in terms of the topics listed below:

- RBS Involvement with Neshaminy
- Participation by Neshaminy Personnel
- Attitudes of District Planning Group and Classroom Teachers
- Findings and Results to Date at the District, Building, and Classroom Levels.
- Initial Use of Instructional Materials--Summary of Findings

RBS Involvement with Neshaminy

Prior to the involvement of Neshaminy School District with RBS, some of the basic concepts of the comprehensive planning process were outlined in a doctoral dissertation.[4] The procedures related to initiating a planning process had been developed in cooperation with two school districts and extensive personal contact by members of the RBS staff had been involved. Instructional materials based on these first-hand experiences had been subjected to technical review by staff members from

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[4]Temkin, Sanford. A Cost-Effectiveness Evaluation Approach to Improving Resource Allocations for School Systems. Philadelphia: Research for Better Schools, Inc., January, 1970.

various other school districts. The most critical determination the development team was trying to make during this period was to assess the extent to which these materials could be used by school district personnel to initiate a planning process effectively without reliance upon outside experts or consultants.

In an attempt to develop information upon which to base this assessment, RBS instituted a search for a school district where district personnel were willing to take part in an experimental program and to meet the criteria specified for using these materials. Personnel from the Neshaminy School District, profiled in Table II below, expressed interest in this venture.

TABLE II--PROFILE OF THE NESHAMINY SCHOOL DISTRICT

Total District Population		60,000
Type of Area		Suburban
Grade Profile		K-6, 7-9, 10-12
Student Population		13,500
Ethnic Composition		Black 1%
		White 98%
		Other 1%
Number of Buildings:	Elementary	10
	Junior High Schools	3
	High School	1
School District Staff:	Central Office	28
	Building Level	736
Total District Budget		$18,013,800

After initial discussions, representatives of RBS and the Neshaminy School District executed the following Letter of Intent:

April 18, 1972

The purpose of this letter is to document a joint arrangement between Neshaminy School District and Research for Better Schools for the use of Comprehensive Planning's instructional materials for developing performance indicators. This effort would start in May of 1972 and would at least continue through school year 72-73.

The items are as follows:

1. The general acceptance by both parties of the criteria for providing a school district with individualized self-instructional materials in Comprehensive Planning listed on the attached pages.

2. Neshaminy School District specifics

   a. to develop performance indicators in mathematics from kindergarten through twelfth grade.

   b. to use these indicators in at least 2 classes per grade level in the district.

   c. to train staff in modules 1 and 2 of Comprehensive Planning which would involve 1 week activities prior to the close of school and 2 weeks during the summer.

   d. to take responsibility for covering the costs of the project except as enumerated under RBS section.

   e. to provide information to assist Research for Better Schools to evaluate its product.

3. Research for Better Schools specifics

   a. to provide all self-instructional materials and any assistance that may be necessary to supplement the materials.

b. to collect information necessary for evaluating effectiveness of material.

c. to pay $500.00 toward Neshaminy School District's costs and to cover the data processing costs of scoring the indicators for up to 1500 students in the event that time limitations and other constraints make it infeasible for the district to incorporate this capability on their data processing system.

NESHAMINY SCHOOL DISTRICT

BY: _____
(DATE)

TITLE: _____

RESEARCH FOR BETTER SCHOOLS, INC.

BY: _____
(DATE)

TITLE: _____

During the first year, Neshaminy School District initiated curriculum planning in Mathematics. In view of the information sought, an attempt was made to keep contact between RBS staff members and district personnel to a minimum. Detailed records were maintained on all verbal communication between Neshaminy and RBS indicating the type of contact, the purpose, and the people involved, until initial training had been completed, performance indicators had been developed, and the performance indicators developed by the district staff were being administered. As

indicated in Table III, less than seven hours of verbal communication took place in a period lasting about six and a half months. Over a third of the communication time recorded was related to introducing the proposal for cooperation between RBS and Neshaminy and discussing the possibility of pursuing this effort. Another third of the communication time recorded was related to collecting feedback on the success, or lack thereof, Neshaminy was experiencing with this approach to planning. Less than 2-1/2 hours of communication time were actually required for the purposes of providing information not included in the instructional materials and resolving difficulties encountered. (Most of this time was spent correcting flaws which the Neshaminy staff had discovered in the instructional exercises.)

Approximately eight communications recorded between October, 1972 and June, 1973 were related to data-processing techniques. During that period, RBS was acting as liaison between personnel in Neshaminy and the staff of the computer facility, in order to provide a quality control check on the computer programs being developed. RBS staff members visited Neshaminy twice in early 1973 when district personnel started to expand their planning capability to the Language Arts curriculum area. By 1973, there were no longer any financial ties between Neshaminy and RBS (see the Letter of Intent on page 16) and school district personnel were in direct contact with the computer processing facility. Thus, with less than three days of verbal communication between Neshaminy School District personnel and Research for Better

TABLE III - VERBAL COMMUNICATION BETWEEN NESHAMINY SCHOOL DISTRICT AND RESEARCH FOR BETTER SCHOOLS

Date	Type of Contact	Personnel	Purpose	Duration
April 7, 1972	Meeting (Neshaminy)	Asst. Program Director, RBS Planning Comp. Director, RBS Asst. Supt. Principal	To introduce Comprehensive Planning and determine if Neshaminy staff would be interested in a joint agreement to field test materials.	1-1/2 hours
April 28	Meeting (Neshaminy)	Planning Comp. Director, RBS Math. Coor.*	To provide a general introduction to comprehensive planning and deliver a set of materials.	1 hour
June 16	Meeting (Neshaminy)	Planning Comp. Director, RBS Planning Coor., RBS Math Curriculum Advisory Committee (13 people)	To affirm RBS support to staff.	20 minutes
June 20	Telephone	Math Coor. to Planning Comp. Director, RBS	Question about budget information in Basic Skills and Concepts Manual.	30 minutes
June 20	Telephone	Math Coor. to Planning Coor. and Developer	Questions regarding exercises in Units 3 and 5.	30 minutes
July 20	Meeting (Phila.)	Planning Comp. Director, RBS Planning Coor., RBS Developer, RBS Math Coor.	General summation of planning activities to date and debriefing on development activities.	2 hours
September 12	Telephone	Math Coor. to Planning Coor., RBS	Oral evaluation of Project Manager's Manual.	20 minutes
September 22	Telephone	Math Coor. to Planning Coor., RBS	General questions about data processing procedures.	20 minutes
			TOTAL	6-1/2 hours

*Selected by the district to act as Project Manager for the planning effort.

Schools staff members over a two-year period, the Neshaminy staff successfully initiated a planning effort which had been expanded to involve 300 staff members in 14 buildings in two curriculum areas.

Participation by Neshaminy Personnel

Participation by Neshaminy School District personnel over the two-year effort to initiate a planning capability is detailed in Table IV. During the first year, 5% of the district's teachers participated in the planning effort, which was initiated in the curriculum area of Mathematics. During the second year, when the planning effort was expanded to include the curriculum area of Language Arts, more than 15% of the district's teachers were voluntary participants in this project. These participants included teachers from every building in the district, from six grade levels ranging from third to tenth grade.

Attitudes of District Planning Group and Classroom Teachers

The district Mathematics planning group, which developed the K-12 performance indicators, acquired skills which few of them had possessed to any degree before using these instructional materials. Their response to the planning process was highly positive, especially after they saw the end products which were developed. The planning group included members from each of the fourteen schools in the district, who provided important contacts between the planning group and the classroom teachers and the principals in the various district schools.

TABLE IV - EXPANSION OF NESHAMINY SCHOOL DISTRICT PLANNING EFFORT

1972 TO 1974

CURRICULUM AREA	YR.	CURRICULUM PLANNING GROUP NO./POSITION	GRADE LEVELS INFLUENCED	NUMBER OF TEACHERS PARTICIPATING	NUMBER OF BUILDINGS REPRESENTED	NUMBER OF STUDENTS INVOLVED
MATHEMATICS	1972 to 1973	12 - Teachers 1 - Curriculum Coordinator 2 - Principals 15	3rd 6th 8th 9th 10th	21 19 2 6 2 Total 50	10 10 3 3 1 Total 14	572 526 64 171 117 Total 1450
	1973 to 1974	14 - Teachers 1 - Curriculum Coordinator 2 - Principals 17	3rd 6th 7th 8th 9th 10th	23 27 3 9 8 9 Total 79	10 10 3 3 3 1 Total 14	646 744 91 563 411 457 Total 2912
LANGUAGE ARTS	1972 to 1973	NONE				
	1973 to 1974	15 - Teachers 1 - Curriculum Coordinator 1 - Principal 17	4th 7th 10th	24 9 8 Total 41	10 3 1 Total 14	675 884 764 Total 2325

Planning group members were impressed by the way in which test (performance) items could be developed which were based upon the specific planning objectives outlined for each of the K-12 grade levels. They began to see how useful such a tool could be in supplying information directly to various staff members.

Members of the planning group met during the school year to review the results of the fall and spring administration of performance indicators. Again their response during this review was positive, as they attempted to analyze the collected data.

During the summer of 1973, members of the Mathematics planning group conducted a full-scale review of specific items. This analysis resulted in a number of changes: (1) various indicator items were added, deleted, or altered, (2) content objectives were shifted from one grade level to another, and (3) suggestions were developed to assist classroom teachers in better meeting the stated objectives.

Performance indicators were also developed for additional grade levels during the summer of 1973.

The classroom teachers who used the performance indicators were also enthusiastic, since these instruments enable them to determine class mastery of concepts in the fall and measure class progress during the school year. This approach is tremendously valuable, since it assists teachers in determining how best to allocate the instructional time available. Members of the Mathematics planning group and the Project Manager offered their personal assistance to any classroom

teachers who needed help. Teachers' Manuals developed as a part of the planning process also were provided for the classroom teachers.

Before the spring administration of the performance indicators, teachers are encouraged to divide their classes into three equal "achievement" groups (upper, middle, lower). In this way, teachers can determine how successful they have been with their own classes, teaching students at the various achievement levels. Neshaminy teachers considered this a valuable approach.

Since performance indicators are administered on a strictly voluntary basis, teacher acceptance of their use has been excellent. They report that, although it is time-consuming to administer the indicators and score the results, the effort is worthwhile because of the feedback supplied. They support the confidentiality of data which protects the individual teachers. Each individual teacher sees only the results for his own classroom, together with total district results for the same curriculum area at the same grade level. Each principal sees total results for all classes in his building at each subject and grade level, together with total district results by grade level for the same curriculum areas. Members of the central office staff see only the district results.

In summary, members of the planning group, classroom teachers, building principals, and central office staff all reported positively regarding the use of the performance indicators in the Neshaminy School Dist[illegible].

Findings to Date at the District, Building and Classroom Levels

The importance of planning becomes obvious when a problem arises and it is already too late either to anticipate all of its ramifications or to collect data upon which an appropriate solution can be based. Although many of the advantages which accrue from the time and resources invested in planning only become apparent over time, some benefits are immediate. The findings outlined below were recognized by Neshaminy School District personnel as they initiated their planning activities. Findings and planning process difficulties or concerns are listed at the district, building, and classroom levels.

District Level

1. It was discovered that the instructional approach being used was de-emphasizing basic rote mathematic skills well below the priority established for that planning objective.

2. The Neshaminy Mathematics Curriculum Advisory Committee related the planning objectives they had developed to the Mathematics course of study outline which they had previously been working on. The documents produced as a result of this additional work were:

   Preliminary Edition Course of Study for Pre-Algebra Mathematics and 7th and 8th Grade Mathematics

   Algebra I

   Algebra II

   Algebra III

3. Content objectives were moved to more appropriate grade levels.

4. Suggestions were developed to assist teachers in carrying out difficult content objectives.

Planning Concerns

1. Scoring individual tests and transferring items to scoring sheets is a time-consuming process. Means are being explored to provide students with multiple choice answers.

2. It may not be necessary to test all students at each level or building each year. A monitoring system should be devised to focus on specific areas.

3. The duplication and distribution of materials presents a major problem. Extra staff (temporary) are needed to accomplish the task quickly.

Building Level

1. During the school year, high school students tended to forget the Math taught the previous year; that is, they performed better on review items on the pre-indicator than on the post-indicator.

Planning Concerns

1. Building principals need information about the specific purposes for using performance indicators. They need assistance in determining how to allocate resources (human and material) in remediating specific deficiencies which have been identified.

Classroom Level

1. Teachers saw the need to review the learning environment in the classroom, as well as to deal with individual student problems.

2. Teachers were spending too much time on material previously taught.

3. Some of the traditional approaches being used did not produce the desired achievement. New approaches were developed to assist students in mastering particularly difficult concepts.

Planning Concerns

1. Since the program is voluntary, there is a good chance that the teachers who would profit most from participating will choose not to participate.

2. Some teachers view the performance indicator as an individual diagnostic tool rather than as the group instrument it is. This point must be emphasized in future planning sessions.

Initial Use of Instructional Materials--Summary of Findings

Members of the Neshaminy Mathematics Curriculum Advisory Committe, a standing committee under the direction of Fred Stewart, District Mathematics and Science Coordinator, met to discuss initiating a planning process in the district and to evaluate instructional materials developed by Research for Better Schools to guide such an effort. Thirteen teachers and two principals attended two sessions held in June and August of 1972.

At the end of June, this committee met as a planning group for one full day and five afternoons to cover the material presented in the Basic Skills and Concepts manual. (The material covered in this manual had been pilot-tested and subsequently revised.)

In mid-August, the committee spent two weeks constructing performance indicators in accordance with the instructional materials presented in the Beginning Implementation manual.

The Basic Skills and Concepts manual was considered understandable, however, members of the planning group did not fully grasp the concepts presented until they had completed all five units. Some uncertainty is

to be expected and, indeed, may even be desirable, when new concepts are being presented.

Units 1, 2, and 4 were rated highly on overall understandability and clarity; members of the planning group discovered inaccuracies in the answers to exercises in Units 3 and 5, and those units were appropriately revised.

In general, the respondents were "very satisfied" with the two weeks they spent using the Beginning Implementation manual. This effort resulted in the construction of Mathematics performance indicators for grades K-12. They indicated that the steps involved in indicator construction were clearly explained and that ample time had been allotted. Furthermore, several of the planning group members were pleased by the exchange of ideas among all those participating. Group members felt that their goal of creating a product which could be used in evaluating district performance had been accomplished.

The quality control procedures and the item feasibility information were considered particularly helpful by the planning group. Group members did not find the performance indicator diagram particularly helpful and used a format more familiar to them for recording items. The appendices were considered a valuable source of future information.

SUMMARY

The experience of the Neshaminy School District indicates that a planning process can be initiated at the school district level with minimal assistance from outside personnel. Instructional materials developed by the Administering for Change Program of Research for Better Schools, Inc. can be used to help structure such a planning process, while the initiative remains with the district.

Through the two-year effort described, the Neshaminy School District successfully initiated a planning system in two curriculum areas with minimal outside help and now has a planning capability which, if desired, can be expanded to include additional grades and other curriculum areas. The major problems encountered by Neshaminy personnel involved scoring and production difficulties; minor changes in the planning approach are expected to solve these problems. Neshaminy School District staff at all levels have responded to this new capability in an overwhelmingly positive way, and various curriculum changes have already been instituted in an attempt to have the material taught relate more directly to the objectives developed.